

WHAT IS CLAIMED IS:

1. A motor-driven tool comprising:  
a motor including an armature and a stator;  
a cooling fan provided on a rotary shaft of said motor;  
a carbon brush part adapted to be cooled by said cooling fan; and

a housing for containing said carbon brush part and said motor, said housing being provided with a suction port and a discharge port;

wherein said carbon brush part is arranged including a cylindrical side wall between said suction port and a commutator of said motor, said cylindrical side wall located close to an outer periphery of said commutator being provided with a tapered portion which grows wider toward said commutator and grows narrower toward a coil end of said armature, and that between said carbon brush part and said coil end, there is provided a heat radiating plate made of metal and adapted to be engaged with said carbon brush part.

2. A motor-driven tool as claimed in claim 1, wherein air passages are formed between said carbon brush part and said heat radiating plate, and between said heat radiating plate and said armature, and that said heat radiating plate has a shape following a contour of said coil end of said armature.

3. A motor-driven tool as claimed in claim 1, wherein said heat radiating plate attracted to said stator by a magnetic

force includes an engaging portion with respect to said carbon brush part, and an elastic plate portion having an angle  $\theta$ .

4. A motor-driven tool as claimed in claim 3, wherein an electronic component between said plate portion and an elastic rib in a columnar shape provided in said housing.

5. A motor-driven tool as claimed in claim 1, wherein said carbon brush part is provided with a net-like filter.